

CTA Architects Engineers - Cost Estimating System

Project Name White City VA E85 Fuel Dispenser Project Number WCVISN20
 Project Description: Building Area 1

Perimeter 0

Construction Months 6

Estimate based on bid date of: 2/1/2014 Bid ENR Index 5365

Estimate Date 7/10/2013

Division Description	Material Total	Labor Total	Extended Total	Cost/SF	% Total
00 Procurement and Contracting Requirements	35,931	25,665	61,596	\$61,596	18%
02 Existing Conditions	616	248	864	\$864.04	0%
03 Concrete	1,982	1,483	3,465	\$3,465	1%
11 Equipment	102,557	42,101	144,658	\$144,658	43%
26 Electrical	23,629	15,369	38,999	\$38,999	12%
27 Communications	1,762	872	2,634	\$2,634	1%
28 Electronic Safety and Security	5,866	767	6,633	\$6,633	2%
31 Earthwork	1,180	2,511	3,690	\$3,690	1%
32 Exterior Improvements	40,691	2,673	43,364	\$43,364	13%
34 Transportation	25,685	2,649	28,334	\$28,334	8%
Subtotal	239,899	94,338	334,237		
General Contractor's Markup @ 10%	23,990	9,434	33,424		10%

Construction Total	263,888	103,772	367,660	\$367,660
--------------------	---------	---------	---------	-----------

Project Cost Subtotal	263,888	103,772	367,660
-----------------------	---------	---------	---------

Contingency @ 5% 18,383

Total Project Cost	263,888	103,772	386,043	\$386,043
--------------------	---------	---------	---------	-----------

Item Number	Description	Qty	Unit	Material	Material Total	Labor	Labor Total	Unit	Total
Division 00	Procurement and Contracting Requirements								
001234991234	Contractor General Conditions								
	Total Spec 1234	1	Ea.	35,930.90	35,931	25,664.90	25,665	61,596	61,596
					35,931		25,665		61,596
	Division 00 Subtotal				35,931		25,665		61,596
Division 02	Existing Conditions								
024119250010	SELECTIVE DEMOLITION, SAW CUTTING								
0015	Saw Cut: Selective demolition, saw cutting, asphalt, up to 3" deep	300	L.F.	2.05	616	0.83	248	3	864
	Total Spec 4119				616		248		864
	Division 02 Subtotal				616		248		864
Division 03	Concrete								
033053400010	CONCRETE IN PLACE								
1320	Structural concrete, in place, column (4000 psi), round, 2% - 3% reinforcing, 20" diameter, includes forms(4 uses), Grade 60 rebar, concrete (Portland cement Type I), placing and finishing	2	C.Y.	660.52	1,321	494.40	989	1,155	2,310
1320	Structural concrete, in place, column (4000 psi), round, 2% - 3% reinforcing, 20" diameter, includes forms(4 uses), Grade 60 rebar, concrete (Portland cement Type I), placing and finishing	1	C.Y.	660.52	661	494.40	494	1,155	1,155
	Total Spec 3053				1,982		1,483		3,465
	Division 03 Subtotal				1,982		1,483		3,465
Division 11	Equipment								
111234991234	Start-up and programing	1	Ea.	1,796.55	1,797	6,672.89	6,673	8,469	8,469
1234	Point of Sales	1	Ea.	16,168.90	16,169	6,929.53	6,930	23,098	23,098
1234	Fuel Tank and Piping	1	Ea.	58,259.40	58,259	23,057.40	23,057	81,317	81,317
1234	Fuel Dispensing	1	Ea.	10,933.30	10,933	5,440.97	5,441	16,374	16,374
1234	5000 galoons of e85 fuel	5,000	Ea.	3.08	15,399			3	15,399
	Total Spec 1234				102,557		42,101		144,658
	Division 11 Subtotal				102,557		42,101		144,658
Division 26	Electrical								
260000991234	Miscellaneous electrical	1	Ea.	2,053.20	2,053	3,079.79	3,080	5,133	5,133
1234	Exterior equipment mounting board and accessories	1	Ea.	1,231.92	1,232	1,539.90	1,540	2,772	2,772
	Total Spec 0000				3,285		4,620		7,905
0519900010	WIRE								
0120	Wire, copper, stranded, 600 volt, #10, type THW, in raceway	5	C.L.F.	31.16	156	58.16	291	89	447
0160	Wire, copper, stranded, 600 volt, #6, type THW, in raceway	20	C.L.F.	84.21	1,684	86.21	1,724	170	3,408
	Total Spec 0519				1,840		2,015		3,855
0533180010	PULL BOXES								
2150	Video junction box, sheet metal, type SC, raintight & weatherproof, 6" L x 6" W x 4" D, NEMA 3R	1	Ea.	30.70	31	58.61	59	89	89
2300	Data/Comm junction box, sheet metal, type SC, raintight & weatherproof, 12" L x 12" W x 6" D, NEMA 3R	1	Ea.	71.83	72	116.04	116	188	188
	Total Spec 0533				103		175		277
0539400010	CONDUIT IN TRENCH Includes terminations and fittings								
0200	Schedule 80 PVC conduit, 1" diameter, in trench, includes terminations and fittings (for Power & Spare)	930	L.F.	3.39	3,151	3.51	3,262	7	6,413
0200	Schedule 80 PVC conduit, 2" diameter, in trench, includes terminations and fittings (for Data/Comm & Spare)	930	L.F.	6.36	5,919	3.51	3,262	10	9,182
	Total Spec 0539				9,070		6,525		15,595
2416200010	PANELBOARD AND LOAD CENTER CIRCUIT BREAKERS								
0700	Circuit breakers, bolt-on, 10 k A I.C., 3 pole, 208 volt, 30 amp in Panel A	1	Ea.	126.18	126	87.35	87	214	214
300010	PANELBOARDS COMMERCIAL APPLICATIONS								
0600	Panelboards, 3 phase 4 wire, main lugs, 120/208 V, 100 amp, 12 circuits, NQOD, incl 20 A 1 pole plug-in breakers (Panel FS)	1	Ea.	713.06	713	544.52	545	1,258	1,258
	Total Spec 2416				839		632		1,471
2816100010	CIRCUIT BREAKERS (in enclosure)								
0200	Circuit breaker enclosure (STP), NEMA 3R, with (1) 20 A, 2p & (1) 20 A, 1P Shunt-trip circuit breakers	1	Ea.	710.87	711	182.27	182	893	893
	Total Spec 2816				711		182		893

Item Number	Description	Qty	Unit	Material	Material Total	Labor	Labor Total	Unit	Total
5613100010	LIGHTING POLES								
4510	Camera pole, anchor base, galvanized steel, 10' high, excl concrete bases	1	Ea.	758.21	758	134.93	135	893	893
4600	Light poles, anchor base, galvanized steel, 20' high, excl concrete bases	2	Ea.	1,383.09	2,766	490.46	981	1,874	3,747
	Total Spec 5613				3,524		1,116		4,640
5623550010	EXTERIOR LED FIXTURES								
0320	Exterior LED fixture, modular, type III, 120 V, 168 watt	2	Ea.	2,128.73	4,257	52.79	106	2,182	4,363
	Total Spec 5623				4,257		106		4,363
	Division 26 Subtotal				23,629		15,369		38,999
Division 27	Communications								
271234131234	Fiber Bulkheads	1	Ea.	60.57	61	66.73	67	127	127
1234	Fiber Switch	1	Ea.	919.83	920	266.92	267	1,187	1,187
	Total Spec 1234				980		334		1,314
1323130010	COMMUNICATIONS OPTICAL FIBER								
0105	Fiber optic cable, 12 strand, multi mode	4	C.L.F.	156.14	546	79.98	280	236	826
1480	Fiber optics cable enclosure, interior, NEMA 1	1	Ea.	196.96	197	198.28	198	395	395
	Total Spec 1323				743		478		1,222
1513130010	COMMUNICATION CABLES								
7244	Unshielded twisted pair (UTP) cable, stranded, PVC jacket, #24, 4 pair, category 6	1	C.L.F.	35.63	18	85.51	43	121	61
8202	Multipair cable, unshielded non-plenum, 300 V PVC jacket, #18, 2 pair	0	C.L.F.	103.13	21	84.74	17	188	38
	Total Spec 1513				38		60		98
	Division 27 Subtotal				1,762		872		2,634
Division 28	Electronic Safety and Security								
282313100010	CLOSED CIRCUIT TELEVISION SYSTEM								
2000	Surveillance camera, in weatherproof enclosure, & mountin hardware, one station	2	Total	2,932.99	5,866	383.59	767	3,317	6,633
	Total Spec 2313				5,866		767		6,633
	Division 28 Subtotal				5,866		767		6,633
Division 31	Earthwork								
311413230010	TOPSOIL STRIPPING AND STOCKPILING								
	Phae II Deduct: Subgrade Prep_Topsoil stripping and stockpiling, loam or topsoil, remove and stockpile on site, by skid steer, 101-500 S.Y., 6" deep, 100' haul	400	S.Y.	0.51	204	2.81	1,122	3	1,326
1520	Subgrade Prep: Topsoil stripping and stockpiling, loam or topsoil, remove and stockpile on site, by skid steer, 101-500 S.Y., 6" deep, 100' haul	360	S.Y.	0.51	184	2.81	1,010	3	1,194
	Total Spec 1413				388		2,132		2,520
2316140010	EXCAVATING, UTILITY TRENCH								
2850	Excavating, chain trencher, utility trench, common earth, 40 H.P., 12" wide, 36" deep, operator riding, includes backfill	460	L.F.	0.63	288	0.68	312	1	600
	Total Spec 2316				288		312		600
3219160010	GEOTEXTILE SOIL STABILIZATION								
1510	Geotextile: Geosynthetic soil stabilization, geotextile fabric, woven, heavy duty, 600 lb. tensile strength	235	S.Y.	2.15	504	0.28	66	2	571
	Total Spec 3219				504		66		571
	Division 31 Subtotal				1,180		2,511		3,690
Division 32	Exterior Improvements								
321123230010	BASE COURSE DRAINAGE LAYERS								
	ASPHALT TRENCH PATCH: Base course drainage layers, aggregate base course for roadways and large paved areas, stone base, compacted, 3/4" stone base, to 6" deep	60	S.Y.	9.24	554	0.40	24	10	579
0110	3/4" Minus: Base course drainage layers, aggregate base course, spread & compacted, 3/4" crushed stone, to 6" deep	235	S.Y.	8.21	1,930	0.40	95	9	2,025
0110	Phae II Deduct: 3/4" Minus_Base course drainage layers, aggregate base course, spread & compacted, 3/4" crushed stone, to 6" deep	400	S.Y.	7.86	3,144	0.40	161	8	3,306
0390	Phase II Deduct: 4" Minus_Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 9" deep	400	S.Y.	8.55	3,419	0.33	133	9	3,552

Item Number	Description	Qty	Unit	Material	Material Total	Labor	Labor Total	Unit	Total
0390	4" Minus: Base course drainage layers, aggregate base course for roadways and large paved areas, bank run gravel, spread and compacted, 9" deep	235	S.Y.	9.24	2,171	0.33	78	10	2,249
7050	BASE Prepare and roll sub-base, small areas to 2500 S.Y.								
Total Spec 1123					11,219		491		11,710
1216140011	ASPHALTIC CONCRETE PAVING, parking lots & driveways								
0035	Phase II Deduct: AC Paving Asphaltic concrete paving, parking lots & driveways, 6" stone base, 4" binder course, 2" topping, no asphalt hauling included	3,600	S.F.	3.71	13,355	0.24	874	4	14,229
0035	ASPHALT TRENCH PATCH: Asphaltic concrete paving, parking lots & driveways, 6" stone base, 4" binder course, 2" topping, no asphalt hauling included	540	S.F.	5.13	2,772	0.24	131	5	2,903
Total Spec 1216					16,127		1,005		17,132
1313230010	CONCRETE PAVING SURFACE TREATMENT								
0400	Concrete paving surface treatment, 4500 psi, fixed form, unreinforced, 12' pass, 12" thick, includes joints, finishing, and curing	235	S.Y.	48.58	11,417	2.24	525	51	11,942
0530	Concrete paving surface treatment, reinforcing steel for rigid paving, 12 lbs/SY	235	S.Y.	7.63	1,792	1.45	342	9	2,134
Total Spec 1313					13,209		867		14,076
9219130010	MECHANICAL SEEDING								
0310	Seeding, mechanical seeding, fine grading and seeding, with equipment, includes lime, fertilizer & seed	120	S.Y.	1.13	136	2.58	310	4	446
Total Spec 9219					136		310		446
Division 32 Subtotal					40,691		2,673		43,364
Division 34	Transportation								
347113170010	SECURITY VEHICLE BARRIERS								
2700	Pipe Bollards: Security vehicle barriers, pipe bollards, steel, concrete filled/painted, 8' L x 4' D hole, 8" diam.	24	Ea.	1,070.20	25,685	110.39	2,649	1,181	28,334
Division 34 Subtotal					25,685		2,649		28,334
Grand Total					239,899		94,338		334,237